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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,099	11/16/2001	Shih-Hsornq Shen	YMBP0001USA	8068

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NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)  
P.O. BOX 506  
MERRIFIELD, VA 22116

EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/683,099

Applicant(s)

SHEN ET AL.

Examiner

Suhan Ni

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

1. This communication is responsive to the application filed 11/16/2001.

***Drawings***

2. The drawings are objected to because of lacking of indication for an inventive subject matter (please see Fig. 1 for the prior art and Fig. 2 for indicating applicant's inventive subject matter). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are numerous of indefinite limitations in the claims, the examples are:

Regarding claim 1, the limitation of "a plurality of bandpass filters each for passing ... and transforming ... and amplifying ... the electrical signals" in lines 3-5 is indefinite since it is not clear how bandpass filter can be utilized for "amplifying the electrical signals". Usually, the task for "amplifying the electrical signals" is done by an amplifier, not a bandpass filter.

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Regarding claim 2, it is not clear what does "two signal transformation unit" refer to. If they refer to microphones, a bandpass filter usually receiving signals from microphones and doesn't comprise microphones.

...

In claim 6, should a microphone be a part of an acoustic signal input device?

...

In claim 14, it is not clear what is "a greatest amplification".

...

Since there are too many indefiniteness limitations in the claims, it would be a burden on the examiner to list them all. Therefore, applicant's corporation for thoroughly revising the claims would be highly desirable for speeding up the processing of this application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Based on the best understood of the claim language with regarding the 112, 2<sup>nd</sup> paragraph rejection as mentioned above, claims 12 and 4-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Vaughn et al. (US-5,233,665).

Regarding claims 1, 7, 13 and 15, Vaughn et al. disclose an acoustic device, comprising: an acoustic input signal (20), a plurality of bandpass filters (28) for filtering the acoustic input

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signal into a plurality of output signals; and a plurality of switches (30, 32) each connected to and controlling a corresponding filter of the plurality of bandpass filters, wherein the switches are capable of being selectively amplifying (34, 35) the output signals as claimed.

Regarding claims 2, 8, 14 and 19, Vaughn et al. further disclose the acoustic device, wherein each of the plurality of bandpass filters receives signal from two signal transformation unit (20) as claimed (Fig 1).

Regarding claims 4, 9-10 and 16-18, Vaughn et al. further disclose the acoustic device, wherein an output signal is amplified by an amplifier (37, 39) and transmitted to a speaker (40) as claimed.

Regarding claims 5, 11 and 20, Vaughn et al. further disclose the acoustic device, wherein the plurality of bandpass filters is formed in a filterbank (28).

Regarding claims 6 and 12, Vaughn et al. further disclose the acoustic device, wherein the device further comprises a microphone (20) for receiving input acoustic signals.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Based on the best understood of the claim language with regarding the 112, 2<sup>nd</sup> paragraph rejection as mentioned above, claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughn et al. (US-5,233,665).

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Regarding claim 3, Vaughn et al. do not clearly teach the details of the bandpass filter as claimed. Since providing a suitable bandpass filter for a filterbank is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a desirable filter, such as a amplitude-tunable filters for the filterbank of the device, in order to make the device to be more configurable for different user and applications.

### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

Suhan Ni

May 10, 2003



SUHAN NI  
PATENT ATTORNEY